

INTELLOFAX 9

INFORMATION REPORT

CD NO. RD A 2647

COUNTRY: Romania

SUBJECT The Sovrompetrol Refinery
No. 1 in Ploesti

DATE DESTROYED 25 SEP 51

NO. OF PAGES

25X1A

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NO. OF ENCLS
(LISTED BELOW)

DATE OF INFO. December 1950

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SUPPLEMENT TO
REPORT NO.

1. The Sovrompetrol today consists of nine refineries which are located throughout Rumania. On 11 June 1948, the date of nationalization, all refineries in Rumania became state property and were divided into two categories; the first was the Sovrompetrol which acquired the Vega, Standard, Columbia, Creditul Minier, and the Brazil refineries, all of which were in working order. The second category belonged to the Rumanian State; they "inherited" the Orion, Moris, Petrolmina, Moria (all of which were in floesti) as well as the Steaua Campina, Vacuum Oil of Brasov and the Prahova refineries in Bucharest. On the same date (11 June 1948) three companies emerged as follows: Sovrompetrol, Societatea Muntania, and Moldova. In 1949 the Prahova refinery was removed from Bucharest (in the district of Cotroceni) to the region of Moinesti in Moldova. On 1 August 1950, the Sovrompetrol took the former Astra Romana, the Romana Americana, Steaua, Vacuum Oil of Brasov and Moinesti (in Moldova) refineries under its control.
2. The Sovrompetrol is today organized into two trusts; the exploitation trust and the transformation trust. The former has three regions, two of which are in Muntania, and the other in Moldova. The transformation trust has under its control all the nine refineries in Rumania; it is charged with the sale of the products as well.
3. The nine refineries owned by Sovrompetrol are as follows:

Refinery No. 1	The former Astra Romana, Orion, Petrobrina and Noris.
Refinery No. 2	Vega
Refinery No. 3	Romana Americana - Teleajen
Refinery No. 4	Steaua Romana Campina
Refinery No. 5	Standard
Refinery No. 6	Creditul Minier
Refinery No. 7	Columbia
Refinery No. 8	Moinesti
Refinery No. 9	Vacuum Oil of Brasov.

The numbers are assigned to the refineries in Rumania according to their importance; thus Refinery No. 1 is the most important in Rumania. The informant states that the first four refineries are considered by the

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Rumanian and Soviet authorities as the most strategic and it is these four which produce the largest amounts of POL (petroleum, oil, lubricants) products. Refinery No. 9 manufactures oil lubricants only.

4. Other than the Sovrompetrol firm, there are two Rumanian companies known as the Muntenia and Moldova which have not been in production since they were bombed in the last war. Intensive reconstruction work is being carried out, however, at the present time. The informant declares that the repairs have been given priority in order to make these companies as "reserve producers" in the event that other oil production areas are eliminated in an eventual bombing raid. In the Moldova area new wells are now being sunk and explorations for new oil deposits continue. There is not enough petroleum extracted today in all of Rumania to keep the present facilities occupied.
5. Refinery No. 1 in Ploesti, where the informant's job was to enter the daily production of crude oil into a log and keep accounts of various expenses for the Refinery, was known as the "superior unit of the transformation trust". Refinery No. 1 was governed by the following officials and leaders:
 - a. Director of Refinery - Constantin Stefanescu, a former laboratory worker.
 - b. Chief Engineer - Vasile Davidescu.
 - c. Chief Accountant - Ion Popescu.
 - d. Chief of Administration - Iulian Popescu.
 - e. Chief of Technical Services - Engineer Victor Gradinescu.
 - f. Chief of the Bureau of Construction - Engineer Julius Branovitzer.
 - g. Chief of Planning - Engineer Boris Ghelos.
 - h. Chief of Cadre - Dumitru Dragoi, a former waiter.
 - i. Chief of Power Plant, Steam Plant and Electric Repair Shop - Engineer Roman.
 - j. Chief of Pipe Line Repair Shop - Assistant-Engineer Barbulescu.
 - k. Chief of Mechanical Repair Shop - Engineer Nicolae Iliescu.
 - l. Chief of Tin Shop, Builders, Carpenters, and Painters Shop - Assistant Engineer Petre Tudoraru.
6. The exports of POL from Refinery No. 1 and probably for all of the Sovrompetrol enterprises are based on three accounts. They are as follows:
 - a. Armistice Article 22-23 Account: These exports are made without payment and the refinery is reimbursed by the Rumanian Ministry of Finance. Informant has no figures of either the payments made or the quantity of products shipped to the Soviet Union on this account.
 - b. The Commercial Accord with the Soviet Union: The Soviets paid for their products received under this account at a rate less than the cost of production. The difference in cost was paid by the Rumanian Ministry of Finance.
 - c. Compensation Account: This account was paid to the Soviet Union in the form of fuel for Soviet vessels. This was explained to mean that the Rumanians provided the fuel oil

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for vessels and the Soviets provided the transportation. Informant added that the only items shipped or transported by such Soviet vessels were Rumanian goods produced for the Soviet Union.

7. No satellite nations received any POL products from Refinery No. 1 with the exception of Hungary which received a very small amount of "nigrol" type oil on special order. The remainder of the products were shipped immediately at the rate of 85 percent to 90 percent of each month's production to the Soviet Union. The remaining 10 to 15 percent was for internal consumption.
8. The refining capacity for Refinery No. 1 ranges from 200,000 to 220,000 tons each month. There is, however, a shortage of crude oil which decreases the average monthly production of all products to the actual sum of 130,000 to 160,000 tons per month. The figure of gasoline produced per month amounts to 22 percent of the overall figure for the month. The informant adds that this latter figure is raised to 25 percent by the process of adding iso-octanes (100 percent octane rating to low-test products). The loss of products (spilling, accidents, and evaporation) must not exceed the figure of 2.4 percent of the actual monthly production. This is the limit permitted by the Soviet authorities; should this figure be exceeded, the "overpayment" on the basic salaries for that month is withheld from each of the approximate 3,500 employees.
9. The most important product is "ethylized gasoline" for aircraft use. Next in importance is fuel for tractors. The aviation gasoline production totals between 30 to 40 percent of the monthly gasoline figure given above which, in turn, is from 8 to 10 percent of the actual monthly production figure for the entire refinery. The differences in the figures for the gasoline produced minus the amount of aviation gasoline produced results in the total for use by automotive vehicles.
10. The "heavy" gasoline (that is below 52 octane rating) is mixed with a product known as motorine (which has a lower octane rating than kerosene) to produce tractor fuel. This fuel is exclusively for export. The informant has no information concerning quantities produced.
11. There is only a minimum quantity of gasoline, kerosene and fuel oil for internal consumption. All transportation which uses petroleum products as a source of power is greatly restricted in Rumania. The few private cars existing today use gasoline paid for at the rate of 75 lei per liter. The cost for the same quantity for official use is 26 lei. According to the last calculation made by Refinery No. 1, the cost of producing and processing each liter of gasoline varied between 2.6 and 3 lei per liter.
12. The informant states that rationing of kerosene to the Rumanian civilians is a haphazard affair. Sometimes the ration is limited to two liters per week per family in winter months and sometimes this figure is raised to five liters per family. In the event that the local POL reservoirs have adequate supplies, the town officials sometimes do not even ask for ration cards and allow each family as much kerosene as it requires. There have been periods, however, when the reservoir supply has been exhausted and kerosene and gasoline have been impossible to obtain at any price.
13. The largest and most important installations at Refinery No. 1 are the four pipe stills. Pipe Still No. 2, former Orion installation, is the most modern in Rumania and produces cracked gasoline, motorine (fuel oil), and briquettes which are known in Rumania as coke de petrol. The three other pipe stills produced:
 - a. Distilled gasoline.
 - b. Distilled motorine (fuel oil).

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- c. White spirits (which is a light kerosene used for tractors and often mixed with gasoline and made available for use in automobiles).
 - d. Petrol (kerosene).
 - e. Pacura (tar). If the tar has a high paraffine content it is sent to the Dubbs installation for further cracking.
14. The Dubbs installation has four units which are used for cracking crude oil. The products from Pipe Stills 1, 3, and 4 have a high tar content; the tar is extracted at the Dubbs installation and the residue is what is known as prime oil. This prime oil is used as the raw material for further extractions at the Dubbs installation. Oil of 130 different types, according to viscosity are produced here.
 15. The specialist for the parafflow installation is Engineer Eugen Constantinople, a Rumanian citizen of Greek origin¹. The parafflow installation is in the former Noris refinery near Pipe Still No. 2 and located near the Ploesti South station. It is of strategic importance since it is the only installation in Rumania which manufactures the ingredients for preparing lubricant oil for aircraft. The installation is used for mixing the 130 types of oil (mentioned above) with parafflow (known as paragel in Rumania). Some quantities of the parafflow "mix" is sent to other refineries where it is blended with oil products intended for aircraft use.
 16. There is an installation for extracting tar from cracked oil known as desosfaltare (sic). The oil resulting from this process is sent by pipe line to various other installations for further refining.
 17. Only Refinery No. 1 has an installation for manufacturing gasoline from the rich natural gas. This is done by a process of mixing the natural gas (air) with certain chemical elements which result in a higher volatile gasoline with an octane rating of over 90. The informant has no idea of the chemicals used in this process but mentioned that perhaps caustic soda and sulphuric acid might be used. The high test gasoline resulting from the process is mixed with the lower 60 or 70 octane gasoline and the result is aviation gasoline. In Rumania aviation gasoline has an octane rating of 72 and is mixed with tetra-ethyl of lead. Gasoline used for automobiles has an octane rating as low as 60.
 18. From the Dubbs installation the gasoline is passed to another installation which is called the reforming coarse cracked gasoline installation. It is located two kilometers from the Dubbs installation and is only used when there is a need for such gasoline. It was installed by the Germans about 1942. Since all German property was expropriated by the Soviet Union, the installation was given to the Sovrompetrol firm as the Soviet contribution to the company. There is still another former German installation known as the Rowat. The informant knows only that it is not in working order since the Soviet Army removed all the instruments and apparatus and carried them to the Soviet Union. The informant does not know what the installation is capable of producing and knows only that the Soviets have only recently abandoned it as useless despite having repaired the internal bomb damage. The gasoline which comes from the "reforming of the coarse cracked gasoline" installation is very much like the best grade of gasoline produced by the pipe stills. The octane rating varies between 52 and 92 and the purest gasoline is used for pharmaceutical purposes.
 19. There is an installation for mixing iso-octanes which increases the octane rating in low test gasoline. It produces 35 tons per day, but it works only on an average of 10 days per month.
 20. The two tar installations are the former Astra Romana and Orion property. The Astra Romana installation can produce up to 120 tons of tar per day. The Orion production is not known to informant but it is somewhat less than the former. These installations are subject to the "socialized method of competition" in which the chiefs of production of each installation strive

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to make their product cheaper and cheaper. For example, a reward is given to those who can suggest a cheaper production method; they receive a cash outlay of from 8 to 10 percent of their salary. Both of these installations received tar from the desosfaltere (sic) installation. The Orion tar installation, directed by an Engineer Kahn produces (together with the former Astra Romana) hot liquid tar which is transported in railroad tank cars and cold tar transported in rolls and in barrels. The tar is mainly for export to the Soviet Union. The products are stored in very large warehouses located within the refinery grounds.

21. There are two vacuum pipe still installations which use the raw material remnants from the regular pipe stills to make lubricants. The former Astra Romana pipe still refines the lubricant and distills the oil according to temperature which is raised or lowered to produce the quality of oil desired. Of the total production of Refinery No. 1, 30 percent of its overall monthly figure is for lubricants. There are four installations which manufacture lubricants from the raw material which is rich in tar content.
22. The two re-boiler installations known as the "Rosbosler" are used for the same purpose of producing lubricants. This process is on a "ladder" basis in which the liquid raw material is distilled at different levels which are coordinated with different temperatures. The oils are drawn off at the various levels and the results are lubricants of various viscosities. The storage facilities for the lubricants within the Refinery No. 1 are considerable in size since a month's production is always accumulated before it is sent to the Soviet Union in railroad tank cars. Informant could give no information concerning the precise size of the storage areas.
23. There are two installations for "stabilizing" (sic) gasoline. The gasoline from all reservoirs are constantly being tested in the refinery laboratory and those which require stabilizing are transported to two large tanks which have agitators inside. The process for neutralizing is unknown although there is a "doctoring treatment" (sic) for gasoline and tractor fuel in which sulphuric acid is used in some unknown manner. The result is of higher test gasoline and tractor fuel. The gasoline "stabilized" in this manner is always contracted for and this process may be adjusted to provide gasoline of desired octane rating and in the desired amount. This is a huge installation which can allegedly handle the entire gasoline output of the four large pipe stills.
24. Refinery No. 1 also has six ovens with one large chimney for burning the residue of tar. The installation is of small importance and the production is unknown. The product is coke of which there are huge quantities located nearby. The coke is sold to the State railroads and in rare cases to the various industrial plants although the latter in nearly every instance uses liquid fuel oil. The coke is considered much too smoky and produces a high proportion of ashes. It is not sold to the public.
25. The oxygen factory produces 600 cubic meters of oxygen per day by a system known as "distilled fractioning" of air. This process is done by introducing air into a column which has very low temperatures. The oxygen in the air liquifies at minus 182° centigrade; The oxygen produced is stored in tubes of eight cubic meters each. This oxygen is produced continually except one-half day each month when the temperature is lowered still more and liquid air is obtained for use in laboratory experiments. The oxygen produced is used completely by the Sovrompetrol firm for welding repairs. Usually there is not enough to supply the needs of the refinery. There are an unknown number of persons who work in this factory. It is directed by Engineer Nicolas Iliescu who is the director of the mechanical repair shop as well.
26. There are laboratories at each refinery in Rumania. Any discoveries or results are reported and centralized with the laboratory at Refinery No. 1. Every tank and reservoir in the Refinery is tested daily by the laboratory and nothing leaves the refinery until it is tested and officially sealed by the laboratory. There are between 120 and 130 men working at Refinery No. 1 labor

Approved For Release 2001/08/16 : CIA-RDP82-00457R008300490001-0

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who are employed on a three, eight-hour shift per day basis. In January 1951 the experimental laboratory, which is subject to the General Directorate of the Sovrompetrol enterprises, was removed from the premises of Refinery No. 1 to an unknown location in Ploesti. The precise number of employees is unknown; Informant knows that there are more persons than the number at Refinery No. 1 (i.e. 130) and the fact that only chemical engineers are employed. In this laboratory there is a "motor measurement section" where experiments are made on motor car engines to test the effects of gasoline with various octane ratings. An Engineer Osman, a woman, is in charge of the special laboratory. The most difficult problem facing the laboratory is in the testing of lubricants which are very similar. Informant does not know of the organization or other personnel of the laboratory.

27. There is an ice factory which supplies this item for the laboratory needs at Refinery No. 1. It is only a small installation and manufactures enough ice for the families of the employees at the refinery to take home.
28. There are two lime burning ovens which produce 100 tons of lime each month from each 200 tons of limestone. The lime is used for the softening treatment of water in order to stop scaling deposits in pipes. Only a few persons are employed at the ovens who control the burning processes. The lime is taken to a mill where it is ground and taken to a water purification plant. There are wells within the plant; the water from these is treated with lime and piped to the various installations throughout the refinery. The water is also used in the various steam and cooling processes employed at the refinery.
29. The electric power plant produces from 6,800,000 to 7,000,000 kilowatt hours per month. It is a large installation and the Concordia Metallurgical factory is supplied with an amount ranging between 1,300,000 to 1,500,000 kilowatt hours per month depending on the season. Natural gas is used to produce the steam which turns the turbines. Natural gas comes from the installation described above. The remainder of the natural gas is used as fuel after elements for making gasoline have been extracted. In the rare event, usually during heavy winter months, when the natural supply is not enough the power plant uses the remaining residues from the various cracking processes. Actually, the refinery is not permitted to use liquid fuel except in the case when natural gas is completely unavailable.
30. The reservoirs at Refinery No. 1 total over 300 in number and store some gasoline and mostly lubricants. These iron tanks vary in size from the small 1,000 ton capacity reservoirs, to the 5,000 and the 10,000 ton capacity reservoirs. The vari-colored camouflage which had been in use during the war is still present. Around each of the reservoirs there are concrete blast walls. There have been no new reservoirs constructed and only those which have been bomb damaged have been reconditioned. There are no underground storage tanks, according to informant.
31. Since nearly all of the gasoline produced was sent immediately to the Soviet Union there did not seem to be a shortage of storage space. The main storage facilities were for lubricating oils.
32. Fire protection devices in the refineries have reached a high degree of perfection. Each pipe still has a very high brick wall surrounding it with only the tall columns being exposed. Within Refinery No. 1 there are approximately 100 firemen who have modern equipment such as an automatic foam system (believed to be carbon dioxide) which functions on the principle of isolating and containing any outbreak of fire. In the event of fire, any installation can be emptied of its products by underground concrete covered conduits. Large shut off valves are to be found in strategic areas. The foam system involves a series of pipes throughout the refinery to which hoses can be attached and the foam played directly on the fire. This system is supplemented with six fire engines with chemical tanks. Fire drills are held every two days. In September 1950 there was a fire in which hot tar exploded; the fire was extinguished very quickly and efficiently. The

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fires usually occur at the Dubbs installation. There are between three and four fires per year. The alarm is given by lights which flash on in the event of a fire. Under the lights there is a small board on which the location of the area of the fire is made known. There is some three to five meter distance between each reservoir and there are water hydrants as well. Actually the fire engines have never been used at Refinery No. 1. There are no sand deposits for fire use, according to informant.

33. During the month in which a fire occurs no employee of the refinery receives his monthly overpayment salary (i.e. above the basic salary); thus every employee is extremely careful. There are "No Smoking" signs throughout the refinery and anyone apprehended smoking is immediately dismissed.
 34. Pipe Still No. 2 in the area of the former Orion refinery was constructed in 1949 at a cost of 96,000,000 lei, according to accounts seen by informant. The Pipe Still was reconstructed from its bomb damaged condition and enlarged with its own cracking plant. It is now the most modern installation in Rumania.
 35. The desosfatare (sic) installation was constructed in 1948 and 1949 at a cost of 26,000,000 lei. It was newly-constructed and has metal columns and ovens.
 36. The repair of the installation for "reforming of coarse cracked gasoline" was during 1949 and 1950. The cost was 38,000,000 to rebuild the bomb damage.
 37. The former German Rowat installation cost the Rumanian Government 32,000,000 lei for reconstruction. It is still not completed and is not now in use. The principle obstacle is to replace the apparatus and instruments taken by the Soviets when the Red Army first entered Ploesti.
 38. The total budget and investments during 1950 reached the figure of 340,000,000 lei. The budget for 1951 is not known to informant.
 39. Salaries paid to the personnel at Refinery No. 1 ranged between the sum of 26,000,000 and 27,000,000 lei per month. The number of workers totaled 3,386 in December of 1950. The informant was dismissed in January 1951.
 40. The informant believes that the Concordia metallurgical factory now produces munitions. He has no details except that military guards are used to protect the factory. The refinery itself has civilian guards.
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1. ~~Comment:~~ All foreigners were ordered to leave Refinery No. 1 on 11 January 1951. There were four persons, two of whom were Swiss engineers and two were Italian masons.